

## PATENT COOPERATION TREATY

PCT

## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

United States Patent and Trademark  
Office  
(Box PCT)  
Crystal Plaza 2  
Washington, DC 20231  
ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing (day/month/year)  
17 August 1998 (17.08.98)

International application No.  
PCT/GB98/00015

Applicant's or agent's file reference  
DC277IP97040

International filing date (day/month/year)  
05 January 1998 (05.01.98)

Priority date (day/month/year)  
04 January 1997 (04.01.97)

## Applicant

HORNE, James, Anthony et al

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:  
29 July 1998 (29.07.98)

☐ in a notice effecting later election filed with the International Bureau on:  
\_\_\_\_\_

2. The election ☒ was  
☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer

Peggy Steunenberg

Telephone No.: (41-22) 338.83.38

## PATENT COOPERATION TREATY

PCT

NOTIFICATION OF THE RECORDING  
OF A CHANGE(PCT Rule 92bis.1 and  
Administrative Instructions, Section 422)

From the INTERNATIONAL BUREAU

To:

TILLBROOK, Christopher, John  
1 Mill Street  
Warwick CV34 4HB  
ROYAUME-UNI

<b>Date of mailing</b> (day/month/year) 02 October 1998 (02.10.98)	
<b>Applicant's or agent's file reference</b> DC277IP97040	<b>IMPORTANT NOTIFICATION</b>
<b>International application No.</b> PCT/GB98/00015	<b>International filing date</b> (day/month/year) 05 January 1998 (05.01.98)

1. The following indications appeared on record concerning:

☒ the applicant
     
 ☒ the inventor
     
 ☐ the agent
     
 ☐ the common representative

Name and Address

 HORNE, James, Anthony  
 9 The Drive  
 Woodhouse Eaves  
 Leicestershire LE11 3TU  
 United Kingdom

State of Nationality

GB

State of Residence

GB

Telephone No.

Facsimile No.

Teleprinter No.

2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

☐ the person
     
 ☐ the name
     
 ☒ the address
     
 ☐ the nationality
     
 ☐ the residence

Name and Address

~~HORNE, James, Anthony~~  
~~14 Paterson Drive~~  
~~Woodhouse Eaves~~  
~~Loughborough~~  
~~Leicestershire LE12 8RL~~  
~~United Kingdom~~

State of Nationality

GB

State of Residence

GB

Telephone No.

Facsimile No.

Teleprinter No.

3. Further observations, if necessary:

4. A copy of this notification has been sent to:

☒ the receiving Office
     
 ☐ the designated Offices concerned  
☐ the International Searching Authority
     
 ☒ the elected Offices concerned  
☒ the International Preliminary Examining Authority
     
 ☐ other:

 The International Bureau of WIPO  
 34, chemin des Colombettes  
 1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer:

P. Regis

Telephone No.: (41-22) 338.83.38

## PATENT COOPERATION TREATY

PCT

From the INTERNATIONAL BUREAU

NOTIFICATION OF THE RECORDING  
OF A CHANGE(PCT Rule 92bis.1 and  
Administrative Instructions, Section 422)

To:

TILLBROOK, Christopher, John  
1 Mill Street  
Warwick CV34 4HB  
ROYAUME-UNI

<b>Date of mailing</b> (day/month/year) 02 October 1998 (02.10.98)	<b>IMPORTANT NOTIFICATION</b>
<b>Applicant's or agent's file reference</b> DC277IP97040	
<b>International application No.</b> PCT/GB98/00015	<b>International filing date</b> (day/month/year) 05 January 1998 (05.01.98)

## 1. The following indications appeared on record concerning:

☒ the applicant      ☒ the inventor      ☐ the agent      ☐ the common representative

<b>Name and Address</b> REYNER, Louise, Ann 20 Station Road Quorn Leicestershire LE12 8BS United Kingdom	<b>State of Nationality</b> GB	<b>State of Residence</b> GB
	<b>Telephone No.</b>	
	<b>Facsimile No.</b>	
	<b>Teleprinter No.</b>	

## 2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

☐ the person      ☐ the name      ☒ the address      ☐ the nationality      ☐ the residence

<b>Name and Address</b> REYNER, Louise, Ann <del>14 Paterson Drive</del> <del>Woodhouse Faves</del> <del>Loughborough</del> <del>Leicestershire LE12 8BL</del> United Kingdom <i># Address in the declaration is the same</i>	<b>State of Nationality</b> GB	<b>State of Residence</b> GB
	<b>Telephone No.</b>	
	<b>Facsimile No.</b>	
	<b>Teleprinter No.</b>	

## 3. Further observations, if necessary:

## 4. A copy of this notification has been sent to:

<input checked="" type="checkbox"/> the receiving Office	<input type="checkbox"/> the designated Offices concerned
<input type="checkbox"/> the International Searching Authority	<input checked="" type="checkbox"/> the elected Offices concerned
<input checked="" type="checkbox"/> the International Preliminary Examining Authority	<input type="checkbox"/> other:

<b>The International Bureau of WIPO</b> 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	<b>Authorized officer</b> P. Regis Telephone No.: (41-22) 338.83.38
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## PATENT COOPERATION TREATY

REC'D 28 DEC 1998

PCT

## PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference DC277IP97040	<b>FOR FURTHER ACTION</b>	See Notification of Transmittal of International Preliminary Examination Report (PCT/IPEA/416)
International application No. PCT/GB98/00015	International filing date (day/month/year) 05/01/1998	Priority date (day/month/year) 04/01/1997
International Patent Classification (IPC) or national classification and IPC G08B21/00		
Applicant HORNE, James Anthony et al		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.



2. This REPORT consists of a total of 5 sheets, including this cover sheet.

- ☒ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 2 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand 29/07/1998	Date of completion of this report 22.12.98
Name and mailing address of the IPEA/  European Patent Office D-80298 Munich Tel. (+49-89) 2399-0, Tx: 523656 epmu d Fax: (+49-89) 2399-4465	Authorized officer Wright, J Telephone No. (+49-89) 2399-2705 

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/GB98/00015

**I. Basis of the report**

1. This report has been drawn on the basis of (*substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.*):

**Description, pages:**

1-15 as originally filed

**Claims, No.:**

1-10 as received on 30/11/1998 with letter of 27/11/1998

**Drawings, sheets:**

1/30-30/30 as originally filed

2. The amendments have resulted in the cancellation of:

- ☐ the description, pages:  
☐ the claims, Nos.:  
☐ the drawings, sheets:

3. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

4. Additional observations, if necessary:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/GB98/00015

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Yes:	Claims	1-10
	No:	Claims	
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-10
Industrial applicability (IA)	Yes:	Claims	1-10
	No:	Claims	

**2. Citations and explanations**

**see separate sheet**

**VII. Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:

**see separate sheet**

**VIII. Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

**see separate sheet**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

---

International application No. PCT/GB98/00015

1. The following document(s) will be referred to in this report; the numbering will be adhered to in the rest of the procedure:

D1 DE-A-44 00 207 [MITSUBISHI JIDOSHA KOGYO K.K.]

The subject-matter of document D1 is considered to represent the prior art the closest to that of the present application.

2. In the following discussion, the patentability of the claims will be examined with regard to the requirements of the PCT. In particular, the claims will be examined for novelty, as defined in 33(2) PCT, and for inventive step, as defined in Art. 33(3) PCT. In addition other aspects, such as clarity requirements of Art. 6 PCT, may be discussed as appropriate.

2.1 Claim 1

As far as can be understood, claim 1 appears to be new, Art. 33(2) PCT. However, claim 1 lacks an inventive step over the prior art, Art. 33(3) PCT.

Document D1 is considered to represent the closest prior art to the present invention. Claim 1 differs from D1 in that it comprises a personal data interface. The person skilled in the art would provide whatever interface was required without making an inventive step. The inclusion of this feature is therefore considered not to represent an inventive step. However, it is noted that if a new claim had been filed where such personal data was used in arriving at the detection of sleepiness, the examiner is of the provisional opinion that this could have been considered as an inventive feature. In the present claim this is merely an optional feature.

Claim 1 is not allowable under Art. 6 PCT since it is unclear for the following reasons:

- a. the feature "of circadian algorithm" has no meaning.

2.2 Claims 2 to 4.

Claim 2 to 4 are not allowable because they lack an inventive step, Art. 33(3) PCT. The reason being that none of the features of claims 6 to 10 appear to contribute subject matter which goes beyond routine work for the person skilled in the art.

2.3 Claim 5

Claim 5 is not allowable since it contains subject matter which is not found in the original

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/GB98/00015

disclosure, in particular the feature of "driver or operator environment" is broader than the term "cab temperature" upon which it appears to be based. The claim therefore appears to be not allowable under Art. 34 2 b PCT.

If this feature were returned to its original form, it would however not involve an inventive step. The examiner is of the opinion that it is obvious to monitor cab temperature in assessing sleep tendency.

**2.4 Claim 6**

Claim 6 merely offers an alternative sleepiness causing monitor factor to the prior art D1. The person skilled in the art would use any such data for monitoring sleep tendency without making an inventive step.

**2.5 Claims 7 and 8**

Claims 7 and 8 contain subject matter which appears to be both new and to involve an inventive step, Art. 33(2) and (3) PCT.

**2.6 Claim 9**

Claim 9 relies for the definition of its scope on features which are only to be found in the drawings. As such the scope of the claim is unclear and it therefore offends against Art. 6 PCT.

**2.7 Claim 10**

D1 also discloses a vehicle, see fig. 2, therefore the subject matter of claim 10, which refers to claim 1, is lacking in inventive step, Art. 33(3) PCT.

Claim 10 would have been allowable, had it referred to claims which were themselves allowable.

**3. In the following section, certain defects in the International Application will be noted.**

- 3.1 Document D1 should have been mentioned in the description in accordance with Rule 5.1 a ii PCT
- 3.2 The description should have been brought into accordance with the claims presently on file in accordance with Rule 5.1 a iii PCT.



# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>DC277IP97040</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. <b>PCT/GB 98/ 00015</b>	International filing date (day/month/year) <b>05/01/1998</b>	(Earliest) Priority Date (day/month/year) <b>04/01/1997</b>
Applicant  <b>HORNE, Jim, A. et al.</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 2 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. ☐ **Certain claims were found unsearchable** (see Box I).

2. ☐ **Unity of invention is lacking** (see Box II).

3. ☐ The international application contains disclosure of a **nucleotide and/or amino acid sequence listing** and the international search was carried out on the basis of the sequence listing

☐ filed with the international application.

☐ furnished by the applicant separately from the international application.

☐ but not accompanied by a statement to the effect that it did not include matter going beyond the disclosure in the international application as filed.

☐ Transcribed by this Authority

4. With regard to the **title**, ☒ the text is approved as submitted by the applicant

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this International Search Report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is:

Figure No. 1 ☒ as suggested by the applicant.

☐ None of the figures.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 98/00015

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 6 G08B21/00

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 G08B A61B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	DE 44 00 207 A (MITSUBISHI ) 7 July 1994 see claims 1-18 ---	1-11
A	EP 0 713 675 A (PIONEER ELECTRONIC CORP.) 29 May 1996 see claims 1-5 ---	1-11
A	WO 95 05649 A (VORAD SAFETY SYSTEMS) 23 February 1995 see abstract -----	1-11

☐ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## ° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&amp;" document member of the same patent family

Date of the actual completion of the international search

25 March 1998

Date of mailing of the international search report

03/04/1998

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Sgura, S

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB 98/00015

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 4400207 A	07-07-94	JP 6197888 A KR 9710575 B US 5574641 A	19-07-94 28-06-97 12-11-96
EP 713675 A	29-05-96	JP 8140949 A	04-06-96
WO 9505649 A	23-02-95	US 5465079 A AU 677858 B AU 7396494 A BR 9407460 A CA 2169262 A EP 0713595 A JP 9501784 T	07-11-95 08-05-97 14-03-95 12-11-96 23-02-95 29-05-96 18-02-97

## INTERNATIONAL SEARCH REPORT

International Application No.

PCT/GB 98/00015

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 6 G08B21/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 G08B A61B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	DE 44 00 207 A (MITSUBISHI ) 7 July 1994 see claims 1-18	1-11
A	EP 0 713 675 A (PIONEER ELECTRONIC CORP.) 29 May 1996 see claims 1-5	1-11
A	WO 95 05649 A (VORAD SAFETY SYSTEMS) 23 February 1995 see abstract	1-11

☐ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&amp;" document member of the same patent family

Date of the actual completion of the international search

25 March 1998

Date of mailing of the international search report

03/04/1998

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel: (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Sgura, S

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

GB 98/00015

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 4400207 A	07-07-94	JP 6197888 A	19-07-94
		KR 9710575 B	28-06-97
		US 5574641 A	12-11-96
EP 713675 A	29-05-96	JP 8140949 A	04-06-96
WO 9505649 A	23-02-95	US 5465079 A	07-11-95
		AU 677858 B	08-05-97
		AU 7396494 A	14-03-95
		BR 9407460 A	12-11-96
		CA 2169262 A	23-02-95
		EP 0713595 A	29-05-96
		JP 9501784 T	18-02-97

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference DC277IP97040	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (PCT/IPEA/416)	
International application No. PCT/GB98/00015	International filing date (day/month/year) 05/01/1998	Priority date (day/month/year) 04/01/1997
International Patent Classification (IPC) or national classification and IPC G08B21/00		
Applicant HORNE, James Anthony et al		

1. This International preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.



2. This REPORT consists of a total of 5 sheets, including this cover sheet.

- ☒ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 2 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand 29/07/1998	Date of completion of this report 22.8.98
Name and mailing address of the IPEA/  European Patent Office D-80298 Munich Tel. (+49-89) 2399-0. Tx: 523656 epmu d Fax: (+49-89) 2399-4465	Authorized officer Wright, J Telephone No. (+49-89) 2399-2705 

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/GB98/00015

**I. Basis of the report**

1. This report has been drawn on the basis of (*substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.*):

**Description, pages:**

1-15 as originally filed

**Claims, No.:**

1-10 as received on 30/11/1998 with letter of 27/11/1998

**Drawings, sheets:**

1/30-30/30 as originally filed

2. The amendments have resulted in the cancellation of:

- ☐ the description, pages:  
☐ the claims, Nos.:  
☐ the drawings, sheets:

3. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

4. Additional observations, if necessary:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/GB98/00015

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

Novelty (N)	Yes:	Claims	1-10
	No:	Claims	
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-10
Industrial applicability (IA)	Yes:	Claims	1-10
	No:	Claims	

**2. Citations and explanations****see separate sheet****VII. Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:

**see separate sheet****VIII. Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

**see separate sheet**



**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB98/00015

1. The following document(s) will be referred to in this report; the numbering will be adhered to in the rest of the procedure:

D1 DE-A-44 00 207 [MITSUBISHI JIDOSHA KOGYO K.K.]

The subject-matter of document D1 is considered to represent the prior art the closest to that of the present application.

2. In the following discussion, the patentability of the claims will be examined with regard to the requirements of the PCT. In particular, the claims will be examined for novelty, as defined in 33(2) PCT, and for inventive step, as defined in Art. 33(3) PCT. In addition other aspects, such as clarity requirements of Art. 6 PCT, may be discussed as appropriate.

2.1 Claim 1

As far as can be understood, claim 1 appears to be new, Art. 33(2) PCT. However, claim 1 lacks an inventive step over the prior art, Art. 33(3) PCT.

Document D1 is considered to represent the closest prior art to the present invention. Claim 1 differs from D1 in that it comprises a personal data interface. The person skilled in the art would provide whatever interface was required without making an inventive step. The inclusion of this feature is therefore considered not to represent an inventive step. However, it is noted that if a new claim had been filed where such personal data was used in arriving at the detection of sleepiness, the examiner is of the provisional opinion that this could have been considered as an inventive feature. In the present claim this is merely an optional feature.

Claim 1 is not allowable under Art. 6 PCT since it is unclear for the following reasons:

- a. the feature "of circadian algorithm" has no meaning.

2.2 Claims 2 to 4.

Claim 2 to 4 are not allowable because they lack an inventive step, Art. 33(3) PCT. The reason being that none of the features of claims 6 to 10 appear to contribute subject matter which goes beyond routine work for the person skilled in the art.

2.3 Claim 5

Claim 5 is not allowable since it contains subject matter which is not found in the original

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB98/00015

disclosure, in particular the feature of "driver or operator environment" is broader than the term "cab temperature" upon which it appears to be based. The claim therefore appears to be not allowable under Art. 34 2 b PCT.

If this feature were returned to its original form, it would however not involve an inventive step. The examiner is of the opinion that it is obvious to monitor cab temperature in assessing sleep tendency.

**2.4 Claim 6**

Claim 6 merely offers an alternative sleepiness causing monitor factor to the prior art D1. The person skilled in the art would use any such data for monitoring sleep tendency without making an inventive step.

**2.5 Claims 7 and 8**

Claims 7 and 8 contain subject matter which appears to be both new and to involve an inventive step, Art. 33(2) and (3) PCT.

**2.6 Claim 9**

Claim 9 relies for the definition of its scope on features which are only to be found in the drawings. As such the scope of the claim is unclear and it therefore offends against Art. 6 PCT.

**2.7 Claim 10**

D1 also discloses a vehicle, see fig. 2, therefore the subject matter of claim 10, which refers to claim 1, is lacking in inventive step, Art. 33(3) PCT.

Claim 10 would have been allowable, had it referred to claims which were themselves allowable.

**3. In the following section, certain defects in the International Application will be noted.**

- 3.1 Document D1 should have been mentioned in the description in accordance with Rule 5.1 a ii PCT
- 3.2 The description should have been brought into accordance with the claims presently on file in accordance with Rule 5.1 a iii PCT.

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 98/00015

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 6 G08B21/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 6 G08B A61B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	DE 44 00 207 A (MITSUBISHI ) 7 July 1994 see claims 1-18	1-11
A	EP 0 713 675 A (PIONEER ELECTRONIC CORP.) 29 May 1996 see claims 1-5	1-11
A	WO 95 05649 A (VORAD SAFETY SYSTEMS) 23 February 1995 see abstract	1-11

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
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- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

25 March 1998

Date of mailing of the international search report

03/04/1998

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB 98/00015

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 4400207 A	07-07-94	JP 6197888 A KR 9710575 B US 5574641 A	19-07-94 28-06-97 12-11-96
EP 713675 A	29-05-96	JP 8140949 A	04-06-96
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